

Lotos "10" Federal No. 1

Perforated the Morrow from 15,038-56 and 15,076-82'
(Total 24', 4 JSPF, 96 holes) with 2-1/8" strip guns.

No pressure after perforating.
Swabbed fluid level down to 14,200'.
No gas or fluid entry.

Loaded tubing with 2% KCL water plus additives with fluid level
at 8000' to perforate 5,000 psi underbalanced.

Perforated the Morrow from 14,772-93, 14,810-18, 14,822-26,
14,828-34, and 14,838-60' (Total 55', 4 JSPF, 220 holes) with
2-1/8" strip guns.

Gas to surface in 7-1/2 hours. 1-2' lazy flare.
Swabbed down to 13,900'. No increase in gas.

Halliburton acidized the Morrow perms from 14,772-15,082' with
2,000 gals 7-1/2% HCL, 2,000 gals methanol, and 4,000 gals CO2
and 237 ball sealers at 4 BPM down 2-7/8" tubing at avg pressure
of 4920 psi. ISIP 4220 psi = 0.72 psi/ft frac gradient = 13.85
ppg EMW frac gradient.

Flowed 380 MCFPD for \pm 12 hours, FTP 110 psi, 19/64" ck.

Perforate the Morrow from 14,592-14,604' (Total 12', 4 JSPF, 48
holes) with 2-1/8" strip guns.
SITP increased from 4100 psi to 6050 psi after perforating.
Open well on 12/64" ck to clean up to pit.

Flow testing well.